

Procedures for Data Collection and Reporting



Virginia Department of Education

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Procedures for Data Collection and Reporting

Introduction

The Procedures for Data Collection and Reporting provide guidelines for the collection, processing, analysis, and reporting of educational statistics in the Virginia Department of Education. These procedures follow the principles set forth in the *Standards for Education Data Collection and Reporting (SEDCAR)* developed by the Cooperative Education Data Collection and Reporting (CEDCAR) Standards Project Task Force under contract to the National Center for Education Statistics, U.S. Department of Education.

The Procedures for Data Collection and Reporting were developed by the Data Coordination Committee, with contributions from representatives of all divisions within the Virginia Department of Education. These procedures are intended to help improve the usefulness, timeliness, accuracy, and comparability of education data that inform key policy decisions in Virginia as well as all levels of the U.S. education system. These procedures describe processes that will result in high quality data. They do not describe the type of data nor specify the indicators that the Department of Education should collect.

DATA COORDINATION COMMITTEE MEMBERS

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1. Management of Data Collection and Reporting

- 1.1 Before initiating a new data collection, determine whether data already available in the Department of Education can be used to meet the emerging information need. Refer to the Calendar of Reports and the Department's web site for sources of data or contact Data Administration.
- 1.2 The Data Administration function of Management Information Systems will maintain documentation of reports, collection instruments, data definitions, and records of available data.
- 1.3 Route all data collections and surveys for new or changed information through Data Administration for review.
- 1.4 Transmit all data collections and surveys addressed to all or a majority of school divisions as a Superintendent's Memorandum after routing through Management Information Systems. Include memorandum number in the proper series (Regulatory, Administrative, or Informational).
- 1.5 The Data Coordination Committee will provide guidance on coordinating data collection activities and data issues that arise.
- 1.6 Become familiar with relevant laws, regulations, or administrative procedures that may affect the data collection activity. Make respondents aware of any laws that might affect participation, responses, or uses of the data. For example, institutions that receive federal assistance are required to report racial/ethnic data.
- 1.7 Be sensitive to the various information needs of the Board of Education, General Assembly, Governor's office, school divisions, and the public.
- 1.8 Maintain contact information (e.g. name, position title, office address, phone number, fax number, e-mail address) on the most appropriate and knowledgeable data person to complete the data collection.
- 1.9 Send a copy of the data collection form, instructions, and Superintendent's Memorandum directly to the contact approximately one week later.
- 1.10 Take steps to minimize the time, cost, and effort required of data providers. Schedule the data collection, to the extent possible, at the convenience of the data providers and with adequate time to respond. Learn the annual work cycles of the respondents.
- 1.11 Schedule data collection activities in consultation with data providers to accommodate annual planning, recordkeeping, and processing requirements. Provide early notification of plans and specifications for new or changing data collections that impact current computer or recordkeeping systems.
- 1.12 Coordinate data collection activities that collect similar information. Attempt to consolidate and schedule similar information needs into one

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collection when feasible. Conduct routine interagency meetings to determine whether multiple agency data requirements can be met by a single data collection.

- 1.13 Keep the data collection instrument as short as possible. Ensure that the use and value of the data justifies the cost and burden. Examine each item in the data collection instrument to make sure that the information is needed and will be used.
- 1.14 Schedule regular evaluations of ongoing data collections to assess continuing need and appropriateness.
- 1.15 Whenever possible, test the survey for “understandability” and respondent effort through focus groups or pilot testing. These activities ensure that:
 - Each item is understandable to the respondent.
 - The technical terms used are appropriate to the respondent.
 - The questions are clear and unambiguous to the respondent.
 - The items elicit a single response.
 - The survey is not too much of a burden for the respondent.
- 1.16 Ensure that these procedures and guidelines are followed by any outside agency that is contracted for data collection or reporting activities.

2. Designing the Data Collection Instrument

- 2.1 Provide clear and detailed instructions for completing the data collection instrument. Provide definitions and clarifying information for individual items and terms.
- 2.2 Formulate questions that address the information needs. Do not request information that is not needed.
- 2.3 When feasible, preprint information on the collection instrument that is available in the Department of Education (i.e., school division name and code, school name and code, etc.).
- 2.4 Adhere to standard definitions of data elements for data collections and reporting. Periodically review, publish, and make available the definitions of data elements. Ensure that definitions conform to nationally developed definitions whenever possible so data are comparable to data produced by education agencies at the school, district, state, and federal levels. If standard definitions are used, indicate the sources of the definitions or conventions used.
- 2.5 Ensure that the data collection method is the most appropriate and effective method for answering the study questions.

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- Base methodology on requirements, least burden to data providers, and available resources.
 - Develop the design according to the type of information to be collected, the unit of analysis, the types of analyses planned, and the purposes for which the data will be used.
 - Determine from the beginning which types of design are warranted in view of the need to measure or analyze change.
- 2.6 Determine whether another organization is already collecting data related to the items you plan to collect. If so, obtain a copy of the instrument and consider using the same definitions and analytic conventions as a starting point for your collection instrument. Other options include asking respondent to report directly from the other form or to request a copy of the completed form.
- 2.7 Indicate subpopulations to include and/or exclude in the reporting. For example, data collection may request that respondents include all students enrolled in kindergarten through grade 12 and exclude students enrolled in pre-kindergarten.
- 2.8 Be clear about the date or time period the data collection should reflect.
- 2.9 Indicate the preferred analytic convention for a given measure. Ask respondents to indicate any different analytic convention and why. For example, the pupil-teacher ratio is calculated by dividing the number of students in membership by the number of full-time equivalent teachers.
- 2.10 Ensure that study questions have the same meaning for different persons. Keep questions simple and short.
- 2.11 Make sure all possible categories are included on the collection instrument if response categories are supposed to be mutually exclusive and exhaustive. If there is any doubt as to whether categories are exhaustive, include an option of “Other (please specify).”
- 2.12 Be sure to include an “unknown/missing” option if data may be unknown or missing.
- 2.13 Include a “not applicable” response for questions that may not be applicable to all respondents.
- 2.14 Do not combine multiple ideas or variables into an item and then request a response specific to one idea or variable.
- 2.15 Assess need/usefulness/burden of closed- versus open-ended item format.
- 2.16 Be sure that return address, fax number, and contact information are included on the form itself as well as in accompanying memorandum.

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3. Data Collection

- 3.1 Where feasible, provide multiple options for respondents to submit data, which may include electronic submission. Make the instrument downloadable from the Department of Education's web site whenever possible.
- 3.2 Identify any special knowledge, experience, certification, or training required for data collections. Reflect the complexity of the project when selecting and designing training. Address cultural, ethnic, and other population characteristics that may affect the data collection when designing training sessions.
- 3.3 Ensure that confidential data are protected by following these guidelines:
 - Never discuss confidential aspects of the data collection activity with unauthorized persons.
 - Keep copies of records, test scores, and other data in a secure place and deliver promptly to the appropriate person/location.
 - During the data collection activities, do not keep any notes or documentation that contain identifying information unless expressly required by the research design.
 - Comply with all applicable federal, state, and local laws concerning privacy and confidentiality.
 - Destroy all records when data collection requirements are completed.
- 3.4 Alert respondents to any changes in long-standing instrument items.
- 3.5 Provide the name of a contact person who can answer questions. Include a phone number, fax number, and/or e-mail address.
- 3.6 Provide a due date to facilitate return of data and the authority for due date whenever it exists (i.e., Appropriations Act, Code of Virginia).
- 3.7 Provide the following information:
 - Purposes of the data collection activities and how data will be used.
 - Importance of respondents' participation.
 - Schedule of events, e.g., due dates, processing, publication release.
 - Confidentiality of response, if appropriate.
 - Methodology used for data collection.
 - All uses of the data, e.g., publication, analysis, licensing, or resale.

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- 3.8 Include a section on the survey for respondents to suggest changes or point out problems.
- 3.9 Describe how missing data will be treated.
- 3.10 Describe any data and sources that will be included as a supplement with the collection response or database.
- 3.11 Indicate the number of years of data that will be publicly available or archived. Indicate whether respondents can correct archived data and/or can obtain a copy of archived data.

4. Data Preparation and Processing

- 4.1 Develop strategies to maximize the rate of return, e.g., telephone call, fax, or e-mail. Make an effort to get a 100 percent return rate, or decide what is an acceptable return rate for the purpose of your analysis.
- 4.2 Develop and implement recordkeeping plans, including maintaining a log noting return of forms or electronic media. If multiple documents are submitted, provide a checklist for each of the items to be submitted.
- 4.3 Implement procedures for notifying respondents when their data are received.
- 4.4 Consider the acceptable level of accuracy, the complexity of the data analysis.
- 4.5 Perform edit and reasonability checks on the data.
- 4.6 Reconcile any data inconsistencies with the respondent and rectify, if necessary, in the database. Document the reasons for significant changes in the respondent's data from one year to the next.
- 4.7 Document all changes made to data, specifying what changed, who made change, and date of change.
- 4.8 Provide the respondent with a verification copy of the information. Make any requested changes before publication.
- 4.9 Use the System Development Life Cycle (SDLC) for all new system development and maintenance programming. The SDLC document identifies the stages and the documentation required for each stage. Each task is identified as mandatory or optional. Appendices to the document include detailed task steps, forms, methodologies, and a glossary of terms. In accordance with the *Code of Virginia*, all state agencies are responsible for complying with the Council of Information Management (CIM) policies, standards, and guidelines for managing information technology resources in the Commonwealth. All stages and tasks in the SDLC are in compliance with CIM models.

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- 4.10 Report to the State Library all new databases that meet the criteria for indexing as instructed in “Guidelines for the Indexing of Databases” dated May 30, 1997. Section 2.1-342, *Code of Virginia*, requires that “every public body of state government shall compile, and annually update, an index of computer databases which contains at a minimum those databases created by them on or after July 1, 1997...” The Data Administration function of Management Information Systems will coordinate all reporting for the Department.
- 4.11 While major agency data should be stored in the Department’s Oracle database, Microsoft Access is the software standard for small projects. Microsoft Access may be used by individuals as long as the following guidelines are met:
- Report any databases created to the State Library (refer to 4.10).
 - Multiple users will not access data.
 - Route new or changed data collection instruments through Data Administration for review.
 - Obtain approval from the custodian of the data before storing any redundant data.
 - Keep a complete set of documentation for the requirements, design, development, and location of any system. Documentation should be adequate to permit the staff to access and use the system effectively.
 - Follow the Systems Development Life Cycle for all development by Department staff and/or persons contracted on behalf of the Department.

5. Reporting and Dissemination of Data

- 5.1 Ensure that adequate resources are available for preparing and disseminating the report.
- 5.2 Ensure that realistic timeframes are set for producing the report.
- 5.3 Identify the appropriate media for presenting findings.
- 5.4 Release data in a carefully planned and systematic manner that provides for full disclosure while protecting the confidentiality and rights of data providers and ensuring the timely receipt of data by all affected parties.
- 5.5 Send special notification of the date and method of release to data providers who might be affected by the release of data. Send advance copies of data to providers when possible.
- 5.6 Ensure that the timing of data dissemination for recurring data collections is consistent from one year to the next.

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- 5.7 Design dissemination methods and procedures to maximize appropriate use of the data.
- 5.8 Ensure that reports are accurate, complete, easy to interpret, and address only issues that directly relate to the data being reported. Reports should be reviewed by management in the Department of Education prior to release or dissemination of the information.
- 5.9 Clearly state the time period covered by the data collection so this time is not confused with the release date of the data.
- 5.10 Ensure that timely responses are made to inquiries regarding the data. The Freedom of Information Act requires that “A response to a request for records must be made within five working days after the receipt of the request.”
- 5.11 Include contact names, telephone numbers, and mailing addresses clearly and prominently in reports and other materials.
- 5.12 All data published on the Virginia Department of Education web site will follow the guidelines listed above for reporting and dissemination of data.